

**Amendment and Response under 37 C.F.R. 1.116**

Applicant: John Wade

Serial No.: 10/788,808

Filed: February 27, 2004

Docket No.: 200208190-1

Title: WIDE ARRAY FLUID EJECTION DEVICE**REMARKS**

The following remarks are made in response to the Final Office Action mailed May 12, 2006 in which claims 1-3, 5, 7-19, 22-28, 30, 31, and 36 were rejected. With this Amendment and Response, claims 28 and 36 have been cancelled without prejudice, and claims 1, 18, and 27 have been amended to clarify Applicant's invention.

Claims 1-3, 5, 7-19, 22-27, 30, and 31, therefore, remain pending in the application and are presented for reconsideration and allowance.

**Claim Rejections under 35 U.S.C. § 102 and 35 U.S.C. § 103**

Claims 1, 5, 7, 10-12, 15-18, 22, 24-26, and 28 are rejected under 35 U.S.C. § 103(a) as being unpatentable over Saunders et al. in view of *In re Harza*, 274 F.2d 669, 671, 123 USPQ 378, 380 (CCPA, 1960).

Claims 1-3, 10-14, 18, and 19 are rejected under 35 U.S.C. § 103(a) as being unpatentable over Anderson in view of *In re Harza*, 274 F.2d 669, 671, 123 USPQ 378, 380 (CCPA, 1960).

Claim 8 is rejected under 35 U.S.C. § 103(a) as being unpatentable over Saunders et al. in view of *In re Harza*, 274 F.2d 669, 671, 123 USPQ 378, 380 (CCPA, 1960) and further in view of Norton U.S. Patent No. 6,309,040.

Claim 9 is rejected under 35 U.S.C. § 103(a) as being unpatentable over Saunders et al. in view of *In re Harza*, 274 F.2d 669, 671, 123 USPQ 378, 380 (CCPA, 1960) and further in view of Anderson.

Claim 23 is rejected under 35 U.S.C. § 103(a) as being unpatentable over Saunders et al. in view of Norton and further in view of Anderson.

Claims 27, 30, and 36 are rejected under 35 U.S.C. § 102(b) as being anticipated by Saunders et al. U.S. Patent No. 5,541,629.

Claims 27, 30, 31, and 36 are rejected under 35 U.S.C. § 102(b) as being anticipated by Anderson U.S. Patent No. 6,471,320.

With this Amendment, claims 28 and 36 have been cancelled without prejudice. The rejections of these claims, therefore, are rendered moot.

With this Amendment, independent claim 1 has been amended to clarify that the fluid ejection device includes, amongst other things, a first set of N memory elements serially

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receiving a series of fire enable values, with each fire enable value including one of an enabling value or a disabling value; a second set of N memory elements serially receiving N image data sub-blocks of an image data block, with each image data sub-block including one of an enabling value or a disabling value; and a third set of N memory elements receiving in parallel the N image data sub-blocks from the second set of N memory elements.

With this Amendment, independent claim 18 has been amended to clarify that the fluid ejection device includes, amongst other things, a data input register including a first set of N memory elements configured to serially receive N image data bits of a row of image data; and a data hold register including a second set of N memory elements configured to receive in parallel the N image data bits from the first set of N memory elements.

With this Amendment, independent claim 27 has been amended to clarify that the method of enabling N fluid ejecting elements of a fluid ejection device includes, amongst other things, serially receiving image data values in each of N memory elements of an image data input register, with each memory element of the image data input register corresponding to a different one of N memory elements of an image data hold register; parallel shifting the image data values from the N memory elements of the image data input register to the N memory elements of the image data hold register and holding the image data values in the N memory elements of the image data hold register, with each memory element of the image data hold register corresponding to a different one of the N fluid ejecting elements, and each image data value being one of an enabling value or a disabling value; and serially receiving fire enable values in each of N memory elements of a fire enable shift register, with each memory element of the fire enable shift register corresponding to a different one of the N fluid ejecting elements, and each fire enable value being one of an enabling value or a disabling value.

With respect to the Saunders et al., Anderson, and Norton patents, Applicant submits that these patents, individually or in combination, do not teach or suggest a fluid ejection device as claimed in independent claim 1 including a first set of N memory elements serially receiving a series of fire enable values, a second set of N memory elements serially receiving N image data sub-blocks of an image data block, and a third set of N memory elements receiving in parallel the N image data sub-blocks from the second set of N memory elements, do not teach or suggest a fluid ejection device as claimed in independent claim 18 including a

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data input register including a first set of N memory elements configured to serially receive N image data bits of a row of image data, and a data hold register including a second set of N memory elements configured to receive in parallel the N image data bits from the first set of N memory elements, and do not teach or suggest a method as claimed in independent claim 27 including serially receiving image data values in each of N memory elements of an image data input register, with each memory element of the image data input register corresponding to a different one of N memory elements of an image data hold register, parallel shifting the image data values from the N memory elements of the image data input register to the N memory elements of the image data hold register and holding the image data values in the N memory elements of the image data hold register, with each memory element of the image data hold register corresponding to a different one of the N fluid ejecting elements, and serially receiving fire enable values in each of N memory elements of a fire enable shift register, with each memory element of the fire enable shift register corresponding to a different one of the N fluid ejecting elements.

In view of the above, Applicant submits that independent claims 1, 18, and 27 are each patentably distinct from the Saunders et al., Anderson, and Norton patents and, therefore, are each in a condition for allowance. Furthermore, as dependent claims 2, 3, 5, 7-17 further define patentably distinct claim 1, dependent claims 19 and 22-26 further define patentably distinct claim 18, and dependent claims 30 and 31 further define patentably distinct claim 27, Applicant submits that these dependent claims are also in a condition for allowance. Applicant, therefore, respectfully requests that the rejections of claims 27, 30, 31, and 36 under 35 U.S.C. 102(b) and the rejections of claims 1-3, 5, 7-19, 22-26, and 28 under 35 U.S.C. 103(a) be reconsidered and withdrawn, and that claims 1-3, 5, 7-19, 22-27, 30, and 31 be allowed.

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**CONCLUSION**

In view of the above, Applicant respectfully submits that pending claims 1-3, 5, 7-19, 22-27, 30, and 31 are all in a condition for allowance and requests reconsideration of the application and allowance of all pending claims.

Any inquiry regarding this Amendment and Response should be directed to either James R. McDaniel at Telephone No. (858) 655-4157, Facsimile No. (858) 655-5859 or Scott A. Lund at Telephone No. (612) 573-2006, Facsimile No. (612) 573-2005. In addition, all correspondence should continue to be directed to the following address:

IP Administration  
Legal Department, M/S 35  
HEWLETT-PACKARD COMPANY  
P.O. Box 272400  
Fort Collins, Colorado 80527-2400


Respectfully submitted,

John Wade,

By,

DICKE, BILLIG & CZAJA, PLLC  
Fifth Street Towers, Suite 2250  
100 South Fifth Street  
Minneapolis, MN 55402  
Telephone: (612) 573-2006  
Facsimile: (612) 573-2005

Date: July 12, 2006  
SAL:bac

  
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Scott L. Lund  
Reg. No. 41,166

**CERTIFICATE UNDER 37 C.F.R. 1.8:** The undersigned hereby certifies that this paper or papers, as described herein, are being facsimile transmitted to the United States Patent and Trademark Office, Fax No. (571) 273-8300 on this 12<sup>th</sup> day of July, 2006.

By   
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Name: Scott A. Lund